

# *Thesmophoriazousai*

## Mytilenean women and their secret rites

### Abstract\*

During the 1984–1994 excavations on the acropolis in Mytilene, a sanctuary devoted to Demeter from the Late Archaic to the Early Hellenistic period was discovered. A series of five or more altars to the east of the site was excavated, producing approximately 5,000 animal bones. The bones of young sheep, goat and pigs predominated, in contrast with other contemporary Demeter sanctuaries in the Greek world which have yielded a characteristic predominance of pig bones. The sanctuary in Mytilene also produced figurines of Kybele, Isis, Aphrodite and Eros, reflecting the polytheistic nature of this place of worship. These different associations may provide the reason for the high percentage of bovid bones from this sanctuary. A circular ash pit at the western end of the row of altars was found filled with calcined bones of perinatal piglets. The exclusive sacrifice of piglets, particularly in this sanctuary context, is reminiscent of Thesmophoric ritual. Ancient testimonia of the rites of the Thesmophoria are examined in this paper, and compared to the faunal evidence in order to reconstruct the ancient ritual that took place on the acropolis in Mytilene. Special attention is paid to the timing of the placement of the piglets in the *megara* prior to their offering on the altar.

### Introduction

“If you are here, you will be queen of everything that lives and moves about; you will have the greatest *timai* in the company of the immortals. Those who violate *diké* will get punishment for all days to come—those who do not supplicate your *me-*

*nos* with sacrifice, performing the rituals in a reverent way, executing perfectly the offerings that are due.”<sup>1</sup>

Thus spoke Hades enticingly to Persephone, who in turn seemed placated from her forceful abduction and captivity with the promise of *timai*: “And high-minded Persephone rejoiced. Swiftly she set out, with joy. But he [Hadês] gave her, stealthily, the honey-sweet berry of the pomegranate to eat, peering around him. He did not want her to stay for all time over there, at the side of her honourable mother, the one with the dark robe.”<sup>2</sup>

The immortals of ancient Greece have been portrayed in many instances as taking their tribute very seriously, and accordingly ancient Greeks must have been disciplined in their rituals and sacred rites. Archaeological evidence can be cryptic, however, when attempting to decipher ancient ritual from cultural remains, so the archaeologist will regularly marry archaeological findings with ancient textual evidence. The hope is that by combining two sources of information, the interpretation of the archaeological evidence will be facilitated, and thus the reconstruction of a more compelling picture of ancient life will be successful. The irony is that the textual evidence also requires interpretation, from translation of the text to the comprehension of the intended meaning. Therefore using one source of ambiguous information to support another can prove fallacious.

A similar research problem arose during the interpretation of the faunal remains from the Demeter sanctuary in Mytilene, specifically with regard to the excavation of thousands of piglet remains in a sacrificial pit. These remains in the context of a Demeter sanctuary are reminiscent of Thesmophoric ritual, although the details of the rites performed during this autumn festival were shrouded in secrecy and largely undocumented. Interpretation of the remains, therefore, requires a

---

\* I wish to thank Professor Hector Williams, director of Mytilene Excavations, for the opportunity to study and publish the faunal material from the acropolis. I am grateful to David Reese who furnished me with his lists of fauna studied from the first five years of excavation, and to Gunnel Ekroth and Jenny Wallensten who invited me to participate in this interesting and useful conference. I am obliged to Sherry Fox and the Wiener Laboratory at the American School of Classical Studies at Athens for workspace and logistical support during the writing of this paper. I am indebted to Gunnel Ekroth who read a draft of this paper and provided helpful comments and references.

<sup>1</sup> *Hymn. Hom. Cer.* 364–369, translated by Gregory Nagy (2000).

<sup>2</sup> *Hymn. Hom. Cer.* 370–374.

certain amount of extrapolation from the information given in the ancient sources, aided by the opinions of scholars who have studied either ancient texts referring to the Thesmophoria or archaeological remains from other Demeter sanctuaries. The specific question addressed in this paper is to determine whether there is a connection between the piglet remains in Mytilene and Thesmophoric ritual. To facilitate this objective, a faunal report of the remains from significant contexts in the sanctuary is provided.

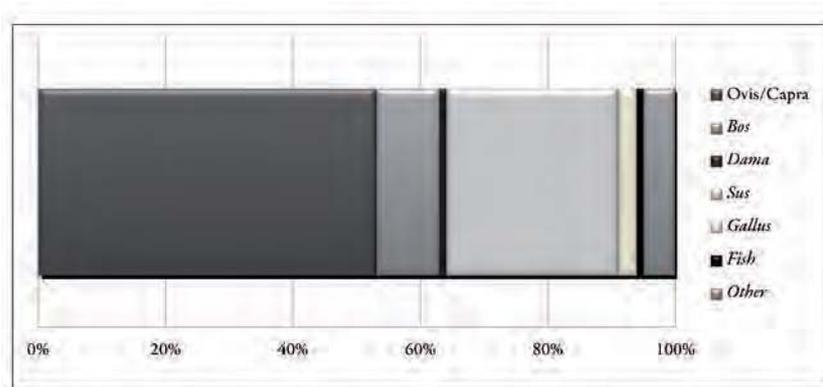


Fig. 1. Summary of fauna from the Archaic-Hellenistic periods from the acropolis site, Mytilene.

## Excavations on the acropolis of Mytilene

One of the many tools for aiding in the interpretation of sacrificial activities is the study of faunal material excavated from “sacred sites”. One such site was excavated on the acropolis of Mytilene. Excavations by the University of British Columbia under the directorship of Hector and Caroline Williams were carried out between 1984 and 1994, supported by the Canadian Institute in Greece and the 10th Ephoreia of Classical and Prehistoric Antiquities. The site is located in Mytilene, the principal town on the island of Lesbos, approximately 18 km off the coast of Turkey, and 360 km from the Greek mainland. The town of Mytilene is built up against green hills; much of the interior of the island is similarly green and mountainous. The rich flora of Lesbos has earned it the title “το πράσινο νησί” or the Green Island, and the island is home to many indigenous animals, some quite rare. The acropolis of Mytilene is crowned by a Byzantine castle and fortress walls built in the 14th century AD during the Gattelus dynasty. It was later reinforced and its interior was continually remodelled by the Ottoman Turks, and it is still one of the largest fortresses in the Mediterranean basin.

Over 60 trenches were excavated within the fortress, recovering a mass of bone and shell material from Archaic, Classical, Hellenistic, Roman, Byzantine and Ottoman levels. Over 40,000 bones were recovered from excavations on the acropolis, revealing information about dietary change throughout the ages of occupation in Mytilene.<sup>3</sup> The focus of this study concentrates on the bones from the Archaic through to the Hellenistic period because a sanctuary de-

voted to Demeter and Kore dating to these periods was discovered.

The architectural remains from this period were severely disturbed by later occupation of the site, particularly by Roman destruction of the sanctuary in 84 BC, and by intensive construction of later buildings during the Ottoman period. Some interesting faunal specimens from the Archaic to Hellenistic levels will be presented here,<sup>4</sup> and an attempt will be made to attribute their presence in the sanctuary to ritual behaviour related to the worship of Demeter.

Approximately 5,000 bone fragments were recovered from the Archaic to the Hellenistic period. Ceramic evidence suggests that the sanctuary had its origin in the late Archaic period, and ended with the Roman occupation of Mytilene in 84 BC. The destruction of the sanctuary left a thick layer of levelling dump over the Hellenistic remains. The height of activity in the sanctuary seems to have been during the late Classical and early Hellenistic periods, thus most of the archaeological material related to its use comes from these strata. The fauna from the excavated areas of the site at these levels are summarized in the chart in *Figure 1*.

## The faunal remains from the sanctuary

The ca. 5,000 faunal remains from the Archaic to Hellenistic levels of the sanctuary, in general, were poorly preserved and heavily fragmented owing to their age, soil acidity, and consecutive construction activities at the site. Domesticated sheep and goat comprised over 50% of the assemblage; there appears to be a predominance of sheep remains over goat, at

<sup>3</sup> The preliminary report on the fauna from the excavations on the acropolis has been published elsewhere, see Ruscillo 1993, 201–210.

<sup>4</sup> The full report of the fauna will appear in the forthcoming volume of excavations on the acropolis of Mytilene (Williams, pers. comm.).

a ratio of about 2:1 based on the bones that could be distinguished between the two species. Pig represents about 30% of the faunal assemblage.<sup>5</sup> Cattle remains represent 10% of the faunal assemblage, but it should be kept in mind that a single cow or bull could provide more than five times the meat than a single sheep or pig. Fallow deer occurred occasionally in the assemblage but was generally rare (1%) suggesting that worshippers exploited mostly domesticated species for sacrificing or feasting. Sheep, goat or pig were also considerably more accessible and cheaper for diners and worshippers, as revealed in the Athenian law code of Nikomachos and other inscriptions from Attica governing sacrificial offerings.<sup>6</sup> Avian and fish remains were few, likely due to lack of flotation and sieving, as well as poor preservation as these remains are fragile in nature. The category entitled “Other” (1%) includes reptile, hare, dog, hedgehog, cat and other avian remains, which were underrepresented in the assemblage and therefore cannot be commented on in a meaningful way. Species such as lizards and hedgehogs are likely intrusive in the assemblage rather than culturally deposited. Shells were surprisingly scarce considering the town is surrounded by the sea, and shell usually preserves quite well. Molluscs are not known to be common offerings to Demeter, however shell consumed at the site may be buried elsewhere in unexcavated areas. Notably, 43% of the entire faunal assemblage from the period of sanctuary use was recovered from a few trenches excavated to the west of the site, located by the modern Turkish landmark, the *medresse* or Islamic theological school. The concentration of bone from the late Classical/early Hellenistic levels from this locale, along with broken pottery, hundreds of terracotta lamps, and figurines, suggests that this area was part of

the dumping ground of the sanctuary. The plethora of lamps also suggests that many of the rites at the sanctuary were nocturnal.<sup>7</sup>

The architectural remains of the sanctuary occur in the area most intensely excavated, just to the north of the modern Turkish mosque. This area covers some 600 square metres.

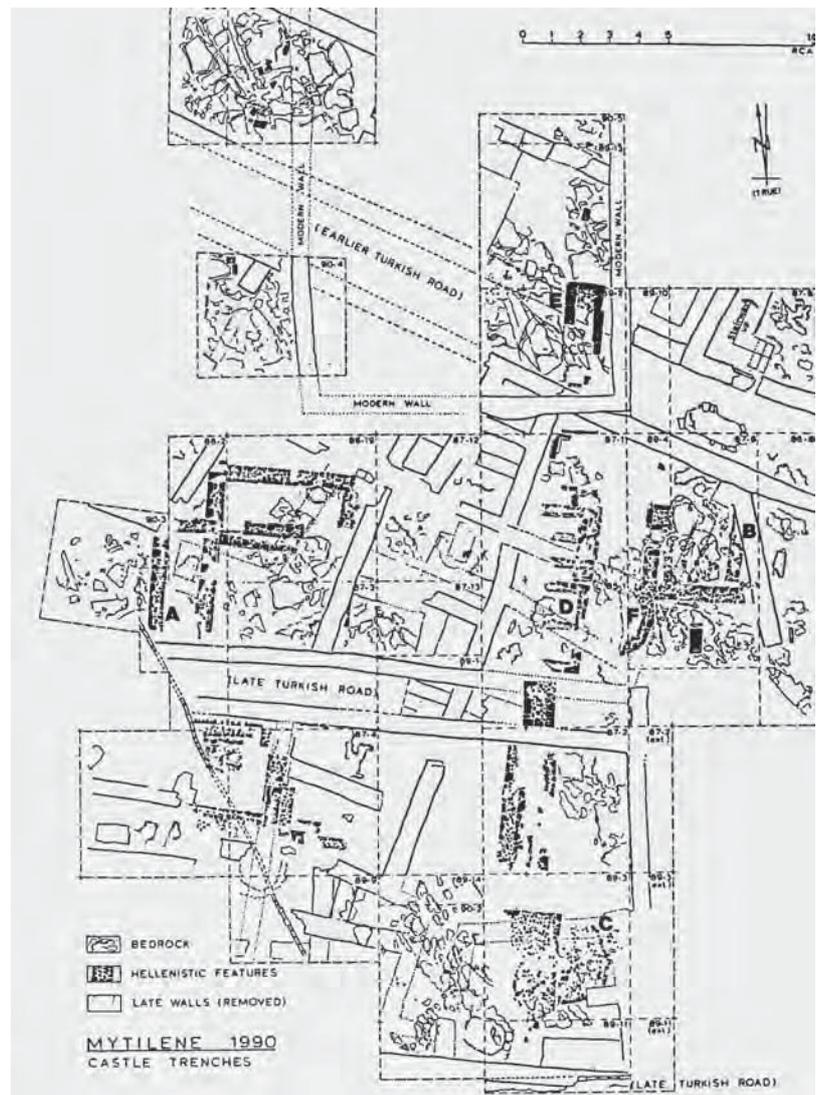


Fig. 2. Plan of excavations of the Demeter sanctuary in Mytilene at the end of the 1990 season. After Williams 1991, 177.

<sup>5</sup> While the majority of the suid remains are from domesticated breeds, the recovery of a few large male tusks suggests that wild boar lived in the lush forests of the island and was hunted occasionally. Payne and Bull's measurement system (1998) for distinguishing between wild and domesticated pigs could not be implemented in this study due to the fragmentary nature of the material.

<sup>6</sup> See van Straten 1995, 176 for comparative prices of victims. Piglets cost three drachmai apiece, lambs four, and kids five. A calf cost 25 drachmai, and adult individuals were at least three to eight times the cost of juvenile individuals. See also Jameson 1988, 91 for comparative costs.

<sup>7</sup> See Williams 1994 for lamps used for nocturnal rituals on the acropolis; a lamp study is forthcoming (H. Williams, pers. comm.). I would like to thank Rebecca Montague for the suggestion that the lamps may have assisted in rituals within a dark, poorly-lit sanctuary.

The plan in *Figure 2* shows the site overlain by walls and roads from the Ottoman occupation (shown here in outline, while the Classical/Hellenistic architectural remains are shown in black); this plan was made *after* some Ottoman walls were removed. The remains of the sanctuary are scant and difficult to interpret. Presumably there was a temple associated with the sanctuary, but although pieces of temple architecture have been found, the temple itself has remained elusive. A temple may underlay the area where later a Byzantine church was built, which was then itself replaced by a mosque.<sup>8</sup>

The plan in *Figure 2* shows a row of five or more altars running north to south, part of a circular or semi-circular pit or altar, and a mess of walls that represent two or three phases of sanctuary construction. Reconstructing walls and structures that are contemporaneous with each other via the stratigraphy, masonry, and pottery is a difficult task. The Classical/Hellenistic walls to the west of the altars have a fair amount of contemporary bone material associated with them. The faunal remains represent edible species, mainly bovids (including cattle, sheep, goat), and suids; some exhibit butchering marks. While the assemblage does not have the quantity to be called a dump, the scattered remains could be interpreted as the debris from meal consumption. This area of the sanctuary could have contained dining rooms, like those found at other sanctuary sites. Remains of stone-built benches may be preserved in the south-west area of this building, like those excavated from the dining rooms in the Demeter sanctuary at Corinth.<sup>9</sup>

Other interesting specimens were also recovered from this area. Several astragaloi were found (*Fig. 3*), all of them polished from handling, and some of them pierced through the centre, presumably for lacing together for transport and storage. Astragaloi are still used in some societies as gaming pieces, and have been used in games for millennia. Many Greeks born before the 1950s played a game with “knucklebones” much like the game of jacks that is well known in Western society. A woman in Mytilene showed me how they were used as dice. But in this sanctuary context, it is tempting to interpret these finds as instruments used in divination or fortune telling. Many rural societies today still include astragaloi in their divination assemblages. At the base of an altar within the sanctuary walls, three lead curse tablets were found.<sup>10</sup> These tablets requested the demise of specific individuals sometime during the 4th–3rd centuries BC, and



*Fig. 3. A selection of polished astragaloi from the sanctuary.*

showed the practice of worshippers at the sanctuary attempting to alter their fate or the fates of others. Therefore, it would not be out of place to consider the astragaloi found here as divination pieces.

Other worked pieces include two toy mice carved from bone found in this area in a Hellenistic to Roman context.<sup>11</sup> They are almost identical and measure about three centimetres in length. They have drilled holes in the hind legs where wheels were likely attached, and a hole through the head where a string could have been laced for towing, like many modern children’s toys. These toys may have been left as votives at the sanctuary for the well-being of specific children. Several terracotta figurines of boys and girls were found in the sanctuary dump demonstrating that children were included in the prayers of some worshippers.<sup>12</sup> A votive relief, probably originating in Attica, shows Demeter and Persephone holding torches to the left of an altar, the servant carrying a sacrificial basket (*kanoûn*) and a piglet accompanies the couple with four small children.<sup>13</sup> In this instance, it appears as if the goddesses are being approached for their patronage of child care.<sup>14</sup>

Another interesting specimen found in this area was unique and unexpected. A single distal phalanx of a brown bear (*Ursus arctos*) was identified amidst the 40,000 bones of the entire acropolis assemblage.<sup>15</sup> Brown bear has never exist-

<sup>8</sup> Excavations around the mosque/church foundations uncovered Byzantine graves, but no clear signs of temple foundations.

<sup>9</sup> Bookidis *et al.* 1999, 4, fig. 1.

<sup>10</sup> Jordan & Curbera 1998. A legible inscription inside reads ΔΑΜΑΡΧΟΣ, consistent with the worship of Demeter, see Jordan & Curbera 1998, 31.

<sup>11</sup> These mice could have been mixed with the Hellenistic remains from the overlying Roman dump, though they are not out of place in the sanctuary context.

<sup>12</sup> Sherwood, pers. comm.

<sup>13</sup> Athens, National Archaeological Museum inv. no. 1016, 4th century BC; van Straten 1995, R68, fig. 82.

<sup>14</sup> van Straten 1995, 78, cf. n. 211, referring to a votive relief showing sacrificial cakes with an inscription, “to the goddesses on behalf of the child” (*IG II<sup>2</sup> 4588*, Athens, Epigraphical Museum 8790), “[Φ]λη ταῖν θεῶν [ἐ]ὐξαμένη ὑπὲρ τοῦ παιδίου.”

<sup>15</sup> The identification of the phalanx as *Ursus arctos* was corroborated by François Poplin (pers. comm.); my thanks to him.

ed on the island. Excavations of fossil deposits in Lesbos have not produced bear bones to suggest that any were ever indigenous on the island, even in the Palaeolithic period.<sup>16</sup> Juliet Clutton-Brock found a single brown bear bone from the assemblage she studied from Emporio on the neighbouring island of Chios, though there are no oral or written accounts of bears extant on the island.<sup>17</sup> The metapodial she identified was polished, so she surmised that it was brought to the island as a talisman. Likewise, the specimen from Mytilene was probably imported to the sanctuary from elsewhere, perhaps from northern Greece or Asia Minor where the brown bear is known to have existed. I do not believe that the bear itself was brought here; it is more plausible that the claw was carried here, perhaps in the form of a pendant or talisman, or perhaps even part of a bear skin rug; the claws are often left in skin rugs.

## The sanctuary

Although epigraphic evidence from the site points to the worship of Demeter,<sup>18</sup> the hundreds of figurine fragments found there inform us of the multi-faceted nature of this particular sanctuary. Reminders that we are close to Asia Minor and the Levant come from the eight figurines of Kybele, mostly seated on her lion throne, and two Isis worshiper figurines carrying a *sistrum*. Some grotesque figurines are present, not surprisingly, since the form originates in nearby Smyrna. There are also a few Aphrodites and many Erotes—the most numerous deity figurines from the sanctuary dump.<sup>19</sup> There is also an abundance of animal figurines, and many other types of draped female votive figurines, including *hydriaphoroi*, *hierodouloi*, and even one or two suspected to be Herakles and Dionysos.<sup>20</sup> By reviewing the representations of the votive figurines found in or close to the sanctuary, it becomes clear that Demeter was not the only deity worshipped at this sacred site. Furthermore, the five or more altars found at the site may not all have been dedicated to Demeter. Other Demeter sanctuaries in Magna Graecia, for example, exhibit a predominance of pig bones in their assemblages, as in Knos-

sos, Corinth, and Cyrene.<sup>21</sup> Here in Mytilene, as illustrated above, 50% of the fauna are bovids, which could be due in part to the variety of deities worshipped here. Testimonia, however rare, do exist on the suitability of bovids as sacrificial victims for Demeter, but especially for Persephone.<sup>22</sup>

The presence of a hearth altar in the sanctuary, furthermore, seems fitting for the worship of chthonic deities, such as Demeter and Persephone.<sup>23</sup> Altar 1 (*Fig. 4*) is comprised of five cells, all revealing burnt areas from their use as sacrificial enclosures, perhaps a type of hearth altar. The sacrifices seem to have been performed directly on the ground perhaps to facilitate the reception of the offering by the worshipped deities of the underworld. This type of altar is well-known from archaeological sites; Yavis presented a similar type from Akragas that he suggested had been used for chthonic rituals.<sup>24</sup> In 1987, David Reese examined the bones from this altar and discovered that almost half were composed of sheep and goat bones, while the other half of the assemblage comprised pig bones. There were also a few cattle bones associated with this feature.<sup>25</sup> He established that most pig and sheep/goat bones were from individuals of less than two years of age. This coincides with the suggested appropriate sacrifices for Demeter and Persephone as mentioned in Pausanias, by Plutarch, by a scholiast on Lucian, and Clement of Alexan-

<sup>21</sup> Knossos: Jarman 1973. Corinth: Bookidis *et al.* 1999; Stroud 1968, 300. Cyrene: Crabtree 1984.

<sup>22</sup> See the examples given in *ThesCRA I*, 79, nos. 115–128.

<sup>23</sup> Nock (1944), and more recently Schlesier (1991–1992), has argued that textual evidence does not support the distinction between Olympian/chthonian ritual practices. van Straten (1995, 167) advises avoiding the use of the terms “chthonic” or “chthonian” in archaeological literature because “it does not appear to stand for any archaeologically definable type of god, cult or altar”, based on the iconographic or textual evidence. I tend to side with Scullion (1994) on this issue, however. He argues that discrepancies in iconographic and textual representations are merely circumstantial, but the archaeological reality is very consistent with specific rituals. Bremmer (2005) states that Greek sacrifice is a system of symbolic signs including colour of animal, presence of wreaths or not, location of consumption, shared or not with the God, high or low altars, wine or no, eaten or wholly burnt, with or without cakes, etc. “Sacrificial rituals always consist of varying combinations depending on the other ritual elements and the function of the relevant divinity” (Bremmer 2005, 163). I therefore see no great discrepancy in the association with hearth altars being used occasionally to venerate underworld deities, and calling these rituals “chthonic”, even just as a supposition. This is not to say that the *eschara* was never used for Olympians, or that the *bomos* was never used for underworld deities, just that there are different types of veneration, as there are in modern religions. The sanctuary at Mytilene has evidence for the worship of Demeter and likely Persephone, and so the suggestion that chthonic rituals took place here is not unfounded.

<sup>24</sup> Yavis 1949, 241.

<sup>25</sup> Reese 1989, 68; Reese, pers. comm. Kadletz’s (1976) review of ancient testimonia on suitable offerings to specific deities finds that cattle, sheep, goat and pig are appropriate offerings to Persephone in different places.

<sup>16</sup> There is no published account of cave bear (*Ursus spaelaeus*) remains from Lesbos; Mayor (2000) discusses other fossil fauna from the island.

<sup>17</sup> Clutton-Brock 1982.

<sup>18</sup> An inscription found on a roof tile with the word MATPOO[N] is suggestive of Demeter, in one of her many epithets (Williams & Williams 1988, 138).

<sup>19</sup> Sherwood, pers. comm.

<sup>20</sup> I am indebted to Kathleen Donahue Sherwood for information on the figurines from the sanctuary at Mytilene, to be published at a later date.



Fig. 4. Altar I, the hearth altar excavated in the sanctuary (used with permission, Williams 2010).

dria, and in inscriptions found at various sites.<sup>26</sup> These mention cattle, young pigs or sheep as suitable offerings. Pigs have been found to be typical sacrifices to Demeter from other zooarchaeological studies, as in the aforementioned Knossos, Cyrene, Corinth, and also Akragas, Knidos and Ephesos, though bovids appear in some assemblages as well.<sup>27</sup>

To the south of Altar 1 is a step altar or *bomos*, named Altar 2. Step altars have traditionally been thought in the past to have been used for sacrifices to Olympian gods as opposed to deities of the underworld, including heroes.<sup>28</sup> van Straten's study of iconographic evidence of sacrifice, however, shows

that step altars are shown to have been used in most representations of all deities.<sup>29</sup> It is clear from the archaeological evidence, however, that these two altar types have been built with specific rituals in mind. It has also been postulated that Altar 1 could have been dedicated to Persephone and Altar 2 to Demeter in similar arrangements at other sanctuaries.<sup>30</sup> If not intended for different deities, perhaps Altars 1 and 2 were used for different festivals throughout the year, according to the appropriate time and type of festival. There is no evidence from either of these altars that holocaust sacrifices occurred, or that sacrifices were partially consumed by participants. Almost no faunal material was recovered from Altar 2, so further speculation is not possible. The other three or four altars are poorly preserved and thus do not contribute to the faunal assemblage.

<sup>26</sup> For the evidence, see *ThesCRA I*, 79, nos. 115–128.

<sup>27</sup> For a synopsis of zooarchaeological remains, see *ThesCRA I*, 80–81, nos. 129–134. For Knidos, see Burkert 1985, 243, n. 17. While the principle deity worshipped at Ephesos was Artemis, Forstenpointner (2001) has found piglet remains within the Artemision which are reminiscent of Thesmophoric ritual to Demeter.

<sup>28</sup> Yavis (1949, 241) was one of the first scholars to propose this distinction. Ekroth (1998, 117) presents the traditional views, but shows by review of the archaeological remains that that rituals specifically to hero cults were not consistently chthonic in nature.

<sup>29</sup> van Straten 1995, 166.

<sup>30</sup> At Eleusis, Clinton (1974, 82) states, “There was more than one altar at Eleusis; Demeter and Kore each had their own”; at Akragas, Yavis (1949, 241) notes that “chthonian and Olympian altars are found side by side”.



Fig. 5. Sacrificial pit dissected by Ottoman wall (now removed) reconstructed by lines A and B (used with permission, Williams 2010).

To the east of Altar 1 lay the remains of a shallow sacrificial ash pit (Fig. 5) sadly greatly disturbed by an Ottoman wall running north to south in between it and Altar 1. Examination of the east wall face of Altar 1 showed that the sacrificial pit had at one time abutted the hearth Altar 1 as shown in the reconstruction in Figure 6, so we can speculate that Altar 1 and the pit were contemporary, though the latter was a slightly later addition. The pit does not form a complete circle, and may be semi-circular measuring approximately two metres at its greatest preserved diameter; only about a third of it has been preserved after the Ottoman wall mentioned above dissected its western side. A few angular rocks were found in the middle of the pit, but there is no evidence that a base was purposely built underneath the ash. The stones enclosing the pit preserve the blackening from fire indicating that the burning of sacrificial victims did take place *in situ*, i.e. the structure is not merely a pit for the deposition of ash. What makes this feature remarkable is not the semi-circular construction, but rather the material it contains. Sorting of the surviving sample from within the pit revealed a faunal assemblage composed almost entirely of charred and calcined piglet remains, which are discussed in greater detail below.

This crude construction does not resemble the circular well altars that have been found at other Demeter sanctuaries in Magna Graecia, like Morgantina, and Akragas in Sicily, and at Corinth, Olympia, and Priene.<sup>31</sup> The pit is crudely

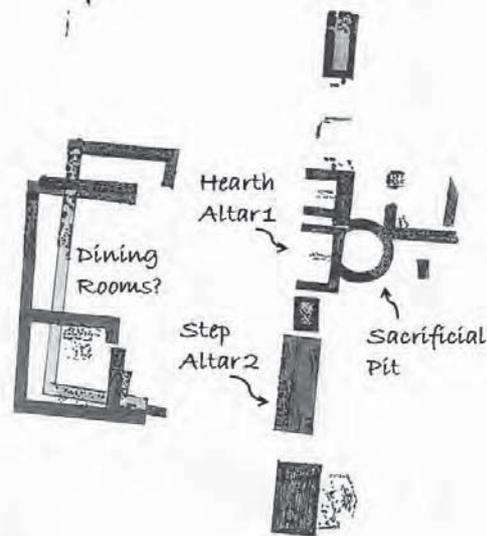


Fig. 6. Plan of altars and sacrificial pit.

constructed with uncut blocks and is fairly shallow.<sup>32</sup> The contents of the pit comprising an abundance of burnt piglet bones and ash provide evidence of a Thesmophoric-like ritual. The pit then may have been used as an altar, perhaps during the final stage of the Thesmophoric ritual.

<sup>31</sup> Incidentally, Priene has evidence for the worship of Kybele as well, in likeness to the sanctuary at Mytilene (Rumscheid 1998).

<sup>32</sup> There is a similar construction for burning animal offerings at the Archegeion in Delos, see Ekroth 1998, 120–121, fig. 1.

## The assemblage from the sacrificial pit

The piglet bones from the sacrificial pit in Mytilene are perinatal, i.e. appear to have been a few days pre- or post-natal, as revealed by their unerupted deciduous canine and incisor teeth and unfused proximal metapodials.<sup>33</sup> Many of the remains, however, are small enough and underdeveloped to have been foetal. The piglets were most likely farrowed by a domesticated sow since they had to have been born in the autumn.<sup>34</sup> Pig farmers can ensure that domesticated pigs can farrow twice a year, once in the spring and another time in the autumn.<sup>35</sup> This is convenient because we know that the Thesmophoria were celebrated in the month of Pyanopsion, approximately the equivalent of our October, coinciding with the sowing of winter wheat and barley.<sup>36</sup> It is also convenient that August to November is the peak birthing time for domestic pigs.

The pit was filled with thousands of piglet bones, even though only approximately a third of the construction was intact after the construction of later walls. All parts of the skeleton are represented, indicating holocaustic sacrificial ritual. Furthermore, all the remains were completely calcined through, which accounts for some shrinkage in the bones. At this young age, shrinkage can be up to 20% of the original size.<sup>37</sup> Despite the even burning of the assemblage, some individuals appear to be smaller than others indicating either breed differences and/or slight age differences, though in every litter, there is size variation between siblings. Because sows farrow their young in the autumn, commonly between September and November, some piglets would have been older than others during the time of the festival. Furthermore, the sacrifice of pregnant sows to Demeter seems to have been commonplace.<sup>38</sup> If the festival was held in Octo-

ber, some sows would certainly still be pregnant.<sup>39</sup> There is ample evidence from the piglet remains that foetal pigs were sacrificed, therefore implying that the mother too was offered to the deity.

The chart in *Figure 7* summarizes the skeletal elements represented in the assemblage from the preserved portion of the pit. In the parentheses are included the hypothetical projections from what could have been in the complete pit; these are the actual number of specimens times three since only approximately a third of the assemblage survived the later Ottoman wall construction. These are provided as a point of interest, to estimate the numbers that may have been used in the original ritual. The Minimum Number of Individuals (MNI) is 29 (87) piglet individuals counted from the left astragaloi. There are 3,188 (9,564) tiny bones from this feature, of which 405 (1,215) are teeth. The other well-represented portions of the skeleton are from the trunk of the skeleton simply because of the relative abundance of many vertebrae and rib pieces in each skeleton and their fragility; these were represented by 408 (1,224) and 473 (1,419) specimens respectively. The vertebrae were unfused, as were all the long bones and phalanges, adding hundreds of epiphyses to the assemblage. There were 11 butchery marks in total in the whole rib assemblage, and 16 on vertebrae. It appears that a few specimens were split longitudinally.<sup>40</sup> Metapodials and phalanges also had good representation because they are sturdy bones that preserve well; there are 16 and 48 respectively in a single individual. Many metapodials could be sided, though digits II and V presented a problem in siding such small individuals. In terms of extremities, both anterior and posterior portions were represented, with a greater frequency of anterior elements, as noted in *Figure 7* by the percentages. In terms of sides, there is a 12% greater occurrence of left-sided

<sup>33</sup> According to the study by Silver (1969) on the ageing of domestic animals, the proximal metapodials are fused before birth, while the epiphyses of the metapodials in the pit assemblage have not yet fused indicating that some of the piglet individuals were foetal.

<sup>34</sup> While wild pig can also farrow twice a year given the ideal environmental circumstances, they typically only farrow young once a year, and exclusively in the spring (Boessneck & von den Driesch 1979).

<sup>35</sup> Lauwerier 1983, 484. Lauwerier also discusses the problems with using piglets as seasonal indicators, but states that the standard of domestic sows farrowing twice a year is usual.

<sup>36</sup> See Stallsmith (2009, 28) for a discussion on this season in Attica, as well as the ancient sources referring to Pyanopsion.

<sup>37</sup> Shipman *et al.* 1984, 320; according to this study of color and shrinkage of burnt bones, the appearance of the piglet remains, calcined white and dark grey, indicate a Stage IV and/or Stage V burning of bones between 440–900+ °C for more than 2 hours.

<sup>38</sup> See Bremmer 2005, 158–160 for the evidence; cf. *ThesCRAI*, 79–80.

<sup>39</sup> Georgoudi (1988, 77) reminds us that it is not always an easy task to find exactly the prescribed sacrificial victim at the precise time that it is required; finding a pregnant sow that has not farrowed her young by the time of the festival may have been an extraordinary task requiring even the scheduling of sow breeding to ensure the participants' success in acquiring the pregnant individual when needed. A sow normally gestates piglets for three months, three weeks and three days. Bremmer (2005, 161) refers to an epigram concerning a "heifer with laden belly" that went into labour during the sacrifice and was subsequently released. Whether this instance is fictional or not, it seems vital to the ritual that the victim is unquestionably pregnant at the time of sacrifice. Bruneau (1970, 270–274 and 286–288) presents textual evidence from Delos which states that a pregnant sow was sacrificed to Demeter regularly at the Thesmophoria. "If this happened at the Delian Thesmophoria, it is likely to have been so at many celebrations of the Thesmophoria elsewhere in the Greek world" (Clinton 2005, 179). This evidence supports the identification of some of the piglet remains in the pit as foetal.

<sup>40</sup> A few terracotta piglets from the Thesmophorion on Thasos are also depicted as being split in this manner (Muller 1996, 448, nos. 1138–1141, pl. 138). I am indebted to Gunnel Ekroth for this reference.

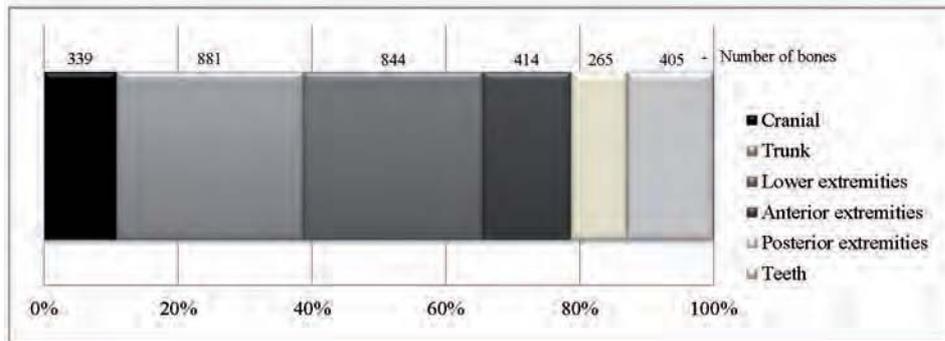


Fig. 7. Summary of piglet bones present in the sacrificial pit of the Demeter sanctuary, Mytilene.

elements in the assemblage. These statistical differences can either be a result of the destruction of the other two-thirds of the pit, or show that in some cases, the hindquarters or right sides could have been removed and offered elsewhere.

It is interesting that anterior elements occur more frequently than posterior in the existing assemblage; this could be significant because of the sheer number of bones. Although there is only 5% difference in the representation in the entire assemblage, there is a 40% difference between the frequency of the anterior and posterior limbs: there are 414 (1,242) anterior elements, and 265 (795) posterior elements. Again, this could be a taphonomic difference related to the destruction of the west end of the pit, or it could show selection, maybe the splitting of the offering between two deities, or perhaps sharing with the participants, or even taking portions of the blessed piglets home to be spread in the fields to ensure fertility. Excavation of the sacrificial pit revealed that the posterior portions of the piglets were mainly found by the eastern edge of the pit. This suggests that the piglets were held by their back legs and thrown into the pit by the worshippers since the majority of the posterior portions seemed to have accumulated just inside of the surrounding wall,<sup>41</sup> while the forelimbs and most of the cranial material seemed to accumulate in the middle of the pit.<sup>42</sup> Whether it was ritually significant that the piglets be deposited in the pit in this manner, or unconscious habit, no one can know.

Unfortunately, excavation of this sanctuary occurred some 20 years ago, when flotation was rarely undertaken on Classical sites. However, in 1993 a palaeoethnobotanist (Kimberly Wooten) floated a small sample that was left in

the pit on the acropolis. She identified barley and grape seeds in the charred sample.<sup>43</sup> Burned seeds found among the piglet bones complete the ritual picture of the sacrifice of piglets mixed with seeds and grains to ensure a good crop (see below).<sup>44</sup> There are also pottery sherds from small vessels and some seashells.<sup>45</sup> Perhaps these small vessels, including bivalves and gastropods shells, contained the seeds and grains that were placed in the fire. Other burnt miscellaneous items found in the altar include 34 avian bones, 20 fish bones, three sea urchin spines, two juvenile horn buds,<sup>46</sup> and two possible snake vertebrae fragments.

## The Thesmophoria

The semi-circular pit at this sanctuary could very well have functioned as a sacrificial altar during the ancient Greek festival of the Thesmophoria, a strictly female festival held in honour of Demeter just before the sowing season in the autumn. The best account of the secret rites of the Thesmophoria comes from a scholiast on Lucian: “When the earth opened up for Korê, a swineherd named Eubouleus was swallowed with his swine in the same chasm. In honour of Eubouleus, piglets were thrown into the chasms of Demeter and Korê along with wheat cakes in the shape of snakes and phalli as well as the cones of the prolific pine tree. The rotted remains of the piglets are drawn from underground *megara* by women called bailers (*antlêtriai*) who had purified themselves for

<sup>41</sup> Representations of youths or men holding piglets by a posterior leg are seen on Attic red-figure vases, see Durand 1986, 135–136, figs. 58–61. Cf. also an Attic red-figure lekythos in the National Archaeological Museum at Athens (inv. no. 1695), where a woman is shown holding a dog by its tail apparently depositing it into the ground, see fig. 10, in the contribution by Ekroth, this volume.

<sup>42</sup> H. Williams published (1994) that only anterior portions of piglets were found in the pit. This was true of the small sample studied during preliminary stages; the sample was taken from the middle of the pit.

<sup>43</sup> Williams, pers. comm.

<sup>44</sup> Clinton (2005, 177) refers to the similarity of a Hittite text describing a fertility ritual involving pigs: “Just as a single pig gives birth to many piglets, let every single branch of this vineyard, like the pig, bear many grape clusters”. That grape seeds were also recovered in this Thesmophoria context is fascinating.

<sup>45</sup> Seashells found in the pit include six *Cerastoderma edulis*, two *Monodonta turbinata*, four *Murex brandaris*, one *Pecten jacobaeus*, one *Macrura corallina*, one *Chlamys opercularis*, and ten *Acanthocardia* sp.

<sup>46</sup> Horn buds are presumably from young sheep, though no juvenile selodont teeth were found.

three days. They clapped and shouted as they descended to scare away snakes that were said to live in the chasms. The remains were mixed on the altar with the seed about to be planted in order to produce a good harvest.<sup>47</sup>

Piglets are recognized fertility symbols, as are the notorious snakes which are said to occupy the *megara*. Furthermore, as the festival was held during the month of sowing, Pyanopsion around October, the Thesmophoria are thought to have been an agrarian ritual of a type to ensure fertility of the crops, upon which matter Demeter herself educated humankind.<sup>48</sup>

The Thesmophoria were rituals shrouded in secrecy. Only married women could participate, and they were sworn to secrecy; divulging the contents of these rites to non-participants was punishable by death. In a comedy by Aristophanes produced in 411 BC, the severity of the crime is revealed. In this play, entitled *Thesmophoriazousai* (*The Women of the Thesmophoria*), Euripides the tragedian has insulted Athenian women, and in response they arrange to discuss his punishment among the other women in the privacy of the Thesmophoria. In response to his anxiety, Euripides shaves and dresses his father-in-law Mnesilochos as a woman in order to attend the festival as a spy. Mnesilochos is caught and tied to a plank for execution by a Scythian archer, but is saved at the last moment by Euripides dressed up as an old woman. In short, spies and snitches were not tolerated. Because of this strictness of secrecy, the exact rituals have not been recorded and we are left to reconstruct these secret rites from vague references in ancient testimonia. Luckily, we have some archaeological clues to help put some pieces together.

The Thesmophoria were fertility rituals which are thought to be carry-overs from an older era; the later myth of Persephone and Eubouleus is merely etiological to explain the need to cast piglets into snake pits. But given that piglets are symbols of female fertility (presumably because of the fecundity of sows which can farrow ten piglets twice a year), and snakes which are anatomically equated with male genitalia and fertility, this ritual must go beyond the mythical story. The symbolism must be more meaningful than a re-enactment of an event in the life of a goddess; its original

meaning, probably inspired by an ancient preliterate society, has been lost. Mixing grains with rotting flesh could perhaps be a practical matter of nourishing the seeds with a natural fertilizer, while keeping within the symbolism of the cycle of life: “Verily, verily, I say to you, except a corn of wheat fall into the ground and die, it abideth alone: but if it dies, it bringeth forth much fruit.”<sup>49</sup> The deceased animal nourishes the new seed to support new life, growth and prosperity.

What we *do* know is that the Thesmophoria were celebrated in at least 50 cities in Greece, Asia Minor and Sicily, though there are no written accounts of the Thesmophoria at Mytilene.<sup>50</sup> The Thesmophoria lasted for three to four days, depending on the place of worship: the first day was the *Anodos* where women would convene together, having chosen their richest and most important women to represent their *deme*. Verbal interactions between women on this day were either perverse or insulting (*aischrologia*). The *Anodos* was the ascension to the sacred space of the Thesmophorion. The second day was a grieving day of fasting (*nesteia*). For this, the women were seated on the ground, without fire in some cities, and only pomegranate seeds were eaten.<sup>51</sup> Insults and bad language were again exchanged among the women. The third and final day, especially the evening and night, was a meat feast in celebration of the *Kalligeneia*, the “goddess of beautiful birth” who appears in no other contexts and has no counterpart among the Olympian gods, further emphasizing the possibly pre-Olympian nature of this festival.<sup>52</sup> On this day of the festival, the rotten piglet remains were likely brought up from underground caverns and placed on the altar and mixed with seeds to ensure good harvest. In some cities, the festival of *Stenia* is included as a pre-Thesmophoric preparation a day or two before the festival.

## Piglets

One aspect of the Thesmophoria that is enigmatic and vague in all the ancient references to the festival is the time at which the piglets were placed in the caverns or *megara*. Scholists and philologists alike have considered this problem for decades. If the piglet remains needed to putrefy, two or three days in a cool underground cavern or pit during the autumn festival would not be sufficient. Early scholars have suggested

<sup>47</sup> Schol. ad Lucian *Dial. meret.* 2.1 (Rabe p. 275.23–276.24); translation by Foley 1994, 73.

<sup>48</sup> For a good review of studies published on the Thesmophoria, see Stallsmith (2009, 28). For the etymology of the name “Thesmophoria,” see Stallsmith 2009, 33–34. “Thesmophoria” was originally thought to have meant “things that are laid down” as in the items carried to the altar or the pigs laid in the pits with cakes, phalli and pine cones (Burkert 1985, 243). A more fitting interpretation suggests that the “things” that are laid down are actually things like laws or decrees, not public laws (*nomos*), but natural laws (*physis*). The name derives from Demeter’s title as law-giver of civilized life rather than the bearer of ritual objects, see Brumfield 1981, 72–73.

<sup>49</sup> John 12:24, Webster’s Bible Translation.

<sup>50</sup> Brumfield 1981, 70.

<sup>51</sup> These seeds were likely eaten to commemorate the pomegranate that Persephone ate, thus sealing her fate to stay in the underworld with her abductor; the seeds that fell on the ground were the food of the dead and should not be picked up (Clem. Al. *Protr.* 2.19.3).

<sup>52</sup> Gill 2011.

that the piglets were deposited from the previous year at the Thesmophoria, and collected a year later at the festival, but in this scenario the soft tissue would have completely disintegrated by the time a whole year passed.<sup>53</sup> Others have suggested that the piglets were deposited during the midsummer fertility festival of *Skirphoria*, and retrieved four months later.<sup>54</sup> But this too is problematic—the remains would be beyond the rotting stage and dried out during this time. It has also been suggested that perhaps the rotted remains of the piglets were retrieved *after* the festival had been completed to allow time for the carcasses to putrefy,<sup>55</sup> but the impression one is given from the description of the ritual is that the consecration of the piglets on the altar with the seeds is the climax and in fact the purpose of the festival performed by the assembly of women. Simon suggests that perhaps the piglets were committed to the *megara* during the festival of *Stenia*, occurring one or two days before the Thesmophoria.<sup>56</sup> But again, five days would not be enough time for the remains to rot in a cool cavern.

Another possibility about the timing of when the piglets were thrown into the *megara* is perhaps the most sensible of all suggestions, allowing the ideal time required for piglets to rot: Clinton suggests that in Athens the piglets were deposited in the *megara* during the Eleusinian Mysteries on Boedromion 21.<sup>57</sup> Several deep pits, one as deep as 7 metres, were dug against the wall of the Telesterion porch, a building known for its use during the Eleusinian Mysteries. If we accept that these are the actual *megara* used for the piglet sacrifice associated with the Thesmophoria, then this would allow the piglets 20 days to putrefy. Logistically, this is a very sound proposal, though there are some unresolved issues. Clinton admits that this would involve bringing the piglets from Athens (or pregnant sows, if we accept the Delian ritual model), and then the participants would have to tend to them for seven days before Boedromion 21, the day that Clinton suggests for the casting of the piglets into the pits. Furthermore, it is likely that the pits around the Telesterion were built for use during the rituals of the Mysteries; we do not have evidence that the Telesterion was used during any other festival. Also, textual evidence suggests that the piglets were thrown down into the *megara* during the Thesmophoria: “The Scholion of

Lucian has to be taken together with a sentence from Clement of Alexandria (*Protr.* 2.17.1). This text clearly states that they threw down the piglets at the Thesmophoria.”<sup>58</sup>

Therefore, it seems sensible from a ritualistic perspective that committing the piglets to the *megaron*, and then retrieving them to sacrifice on the altar mixed with grain must all be performed within the three days of the festival.

Another problem is the vagueness in regard to the role of the snakes. We can understand the symbolism of placing piglets below ground as a chthonic fertility ritual, but the symbolism is somehow incomplete. Piglets were thrown into *megara* containing snakes perhaps because the snakes were a fundamental part of the fertility ritual. Given the danger involved, it would have certainly been possible to make pits that would prohibit snakes from entering, but perhaps the point was to allow the snakes to interact with the piglets.

To address the piglet and snake relationship during this ritual, while also addressing the timing of the deposition of the piglets in the *megara*, it is useful to examine some relevant environmental and zoological issues. These issues specifically address the environment around Mytilene, for this is the site in question, but the timing proposals and information concerning snake behaviour pertain to the understanding of the ritual anywhere in ancient Greece.

Lesbos has one of the most diverse serpent populations of all the Greek islands. Over 17 species have been reported by travellers and herpetologists; there may be as many as 22 species, including rare species like the Blind worm snake (*Typhlops vermicularis*). The island is home to the most poisonous snake in Europe, the Ottoman viper (*Viper axanithina*). Some of the species in this variety can reach a metre and a half in length, sometimes more. They feed mostly on small mammals, reptiles and amphibians. A piglet is easily swallowed by these snakes within an hour or two; large snakes can even eat two or three in one feeding episode.<sup>59</sup> They will eat live animals, or freshly killed animals; they will not eat putrid meat. When the victim has been swallowed, a snake digests the carcass completely, leaving no traces of bones in its stool. A snake may take seven to ten days to digest its meal, depending on the size of its prey and its body temperature—the warmer the temperature, the faster it will digest.

A crucial factor in understanding the process of this ritual (namely, to place piglets in the *megara*, to have them interact with snakes, to putrefy in three days, and to bring them up to offer on the altar with seeds) is to know whether the

<sup>53</sup> Frazer 1922, 45, for example.

<sup>54</sup> Deubner 1932, 40–44; Nilsson 2009, 22 and 40.

<sup>55</sup> Rohde 1870, 554; Clinton 2005, 177: “Piglets are definitely deposited in the *megara* at the Thesmophoria, thus the rotted remains would be fetched up at a later festival and mixed with the seed grain”; the later festival is not identified, however.

<sup>56</sup> Simon 1983, 18–22.

<sup>57</sup> Clinton 1988, 77–78; Evans (2002, 242) accepts this idea as well in her discussion of the Eleusinian Mysteries. The Attic month of Boedromion corresponds roughly to September–October.

<sup>58</sup> Commentary by Burkert in “Discussion” of Clinton 1988, 79. Clinton (1988, 79) rebuts this inference by stating that both works are based on the same source, and must refer specifically to a local Alexandrian festival.

<sup>59</sup> Diamond 1994, 50.

piglets were thrown into the caverns alive or dead. After all, if the piglets were already dead before placement in the cavern, then putrefaction of the carcasses would already be underway and the snakes would not be drawn to these animals. If, however, the piglets were committed to the *megara* alive, then death and decomposition would take at least ten days, perhaps longer in a cool cavern in the autumn.

There is some evidence to suggest that the piglets were cast into the *megara* alive. Pausanias (9.8.1) referred to a ritual to Demeter and Kore at Potniai in Boiotia where newborn piglets were thrown, presumably alive, into the underground *megara*. The text of Clement of Alexandria has been interpreted to mean that the participants of the Thesmophoria “cast down living swine into the *megara*”.<sup>60</sup> If we accept that the piglets were thrown live into the caverns, then we can assume that many of these were eaten by the snakes known to be within. In fact the scholiast on Lucian states, “It is said that there are snakes down below in the chasms which eat most of what is thrown down; for this reason a noise is made when the women bail up and then again when those forms are laid down, so that the snakes will go away, who they believe are the guards of the forbidden places ...”<sup>61</sup>

If the snakes consumed some of the piglets within three days, that would leave only the survivors for offering on the altar with grain, but as was discussed above, three days would not be sufficient time for the animal to die and to decompose. There is, however, one possibility which takes in account all parameters of the ritual established above: the bailers could have retrieved those piglets consumed by the snakes.

This is easily achieved by making loud noises and/or moving the snakes during digestion. It is well-documented that serpents upset in this manner regurgitate meals that impede their quick escape when threatened.<sup>62</sup> Even victims that were swallowed days before can be regurgitated whole. In this scenario, it is not surprising then that the bailers screamed and clapped as they descended; they not only wanted to avoid contact with the snakes themselves, but by doing so, they could have alarmed them enough to regurgitate the piglets they had consumed. If, as the scholiast explains, the bailers made noise so that the snakes would go away, the reality is that snakes laden with a large meal would not be able to

escape unless the meal was regurgitated. Interestingly, and rather useful in this context is that the piglets would be in a putrefied state when regurgitated by the snakes.

Given these time parameters of three days and other ritual requirements as offered by various sources, the following scenario exists: that during the days of the *Stenia* or *Anodos*, women sacrificed pregnant sow(s) to Demeter or brought newly born victims, and then cast the piglets into the *megara*. This primary sacrifice was likely performed on the first days of the festival to allow time for the piglets to either die or be swallowed by serpents, but also because the scholiast on Lucian mentions that bailers had “purified themselves for three days” prior to retrieving the rotted piglet remains from the *megara*. The slaughtering of the pregnant sow in the first days of the festival may have served to purify the participants, particularly the bailers.<sup>63</sup> The piglets would then be cast into the caverns.

A few days later, the bailers descended into the *megara*. They would scream and clap to make loud noises, as the scholion on Lucian describes. By doing so, the snakes below would become distressed and, having consumed the piglets, would be considerably laden down by their victims and unable to flee. They would instinctively regurgitate their victims in order to escape, as snakes do. The bailers would then collect the rotted remains of the piglets and bring them to the altar to be mixed with seeds.

## Thesmophoria at Mytilene

Charred piglet remains in the context of a Demeter sanctuary comprise the largest part of the evidence we have for Thesmophoric ritual in Mytilene. While it is compelling that we should have so many calcined piglets preserved in one sacrificial pit, we have no way of confirming that these are remains from the Thesmophoria. An underground *megaron* was not discovered during the course of excavation here, though most of the acropolis has yet to be excavated. It could very well be that after they were brought up from the caverns the rotted remains were mixed with seeds and then burnt as sacrifice to the goddess on the altar, but the textual evidence does not explicitly state this. Instead, it has been interpreted in the past that the rotted remains were mixed with the grains on the altar and then taken back to the fields to be spread.

<sup>60</sup> Clem. Al. *Protr.* 2.17.1: “μεγαρίζοντες χοίρους ἐμβάλλουσιν”; Jane Harrison (1991, 131) translated this phrase to mean “they cast down living swine in the *megara*”, following Lobeck (1829, 832) who paraphrases “μεγαροῖς ζόντας”.

<sup>61</sup> Schol. ad Lucian *Dial. meret.* 2.1 (Rabe p. 276.8–13), translation by Clinton 1988, 76.

<sup>62</sup> See Bartlett & Bartlett 1998, 58; Engelmann & Obst 1984, 194; Tynes 2010, 30 to name a few. Also, for a graphic demonstration, a quick search on the web for videos of regurgitating snakes can be found—there are plenty. Most snakes are timid and easily threatened.

<sup>63</sup> Clinton (2005, 169–174) reviews the many instances in ancient texts where pigs are used as scapegoats to absorb the pollution of people or places. Pigs were used in purification rituals to rid individuals of impurities, and then disposed of either by immolation, being cast into the sea, by deposition at crossroads or being buried.

It is a logical assumption that all seeds to be sown were not brought up to the sanctuary, and that only a sample of the seeds from the previous harvest was mixed with the piglet remains. In the sacrificial pit on the acropolis in Mytilene, we have botanical evidence that the seeds were also burnt. So perhaps, only a symbolic sample of the seeds to be sown was burnt on the altar with the rotted remains. By doing so, the stench of putrid pigs would also be eradicated or disguised. The two tiny fragments of lateral processes from reptilian vertebrae that could be from snakes may tie the ritual remains in with the underground caverns: perhaps a dead snake was collected among the remains too. However, it must be said that these fragments are not diagnostic of genus, or even family, and could represent an intrusive lizard or skink that fell victim to the flames.

The number of butchered bones in the sacrificial pit, though few, would indicate that some individuals were divided into portions. Perhaps some parts of the piglets were taken back to fields to ritually introduce a blessed sample of the seed to be sown, while the rest were burnt as offerings. Certainly, the rotted piglet remains could not be expected to cover the whole area of the field to act as potent fertilizer, so the ritual must be symbolic. Given all these factors, it is not unreasonable to associate the piglet remains from Mytilene with Thesmophoric ritual.

## Conclusions

The faunal remains preserved from the building, two altars and the sacrificial pit on the acropolis in Mytilene offer insights into the use and practices of the sanctuary. The identification of the sanctuary as devoted to Demeter allows for interpretations involving rituals known in the worship of this deity. The finding of a sacrificial pit within the sanctuary grounds containing thousands of charred piglet remains immediately calls to mind the rituals of the Thesmophoria. The festival ran for three days and was celebrated by all, if not most, of the married women in Mytilene and in many other cities in ancient Greece.

The evidence we have for associating these archaeological remains with Thesmophoric ritual lies in the sacrificial pit, which may have acted as the altar in which the rotted piglet remains and seeds were mixed, and then burnt. Both seeds and piglet remains are present in this pit. The cavern or *megaron* from which the rotted remains were bailed has not been found, though the possibility of its discovery exists pending the continued excavation of the site. It is therefore not implausible that the remains were associated with Thesmophoric ritual.

In reviewing the sequence of activities during the festival in relation to the handling of piglets as offered by the scholiast on Lucian and Clement of Alexandria, one discovers that there are procedures of ritual that are unclear. One such detail is the time of the placing of the piglets in the *megara*. If we believe that there were snakes in the *megara*, and if we accept that the piglets were thrown down into the *megara* alive, then we should refer to true snake behaviour to reconstruct what happened thereafter. It has been stated in the testimonia that the snakes ate most of what was thrown down into the caverns, so we can accept that this part of the ritual is accurate. Snakes, contrary to their terrifying reputation, are timid creatures by nature. They do not attack unless they have no other options for defence; their first instinct is to flee. Furthermore, if they are laden with a large victim, they are less able to strike effectively, making them more vulnerable. The vulnerability when digesting and their instinct to avoid confrontation causes them automatically to regurgitate the object that is impeding their escape from threat. This is simply what snakes do. If we do not accept this option as a viable solution for producing rotted remains within three days of the festival, then we must again re-examine the written sources, both past and present, to determine a suitable time for the placing of the piglets in the *megara*.

However, if we were to entertain the idea that regurgitated piglets were used for this ritual, we would see that symbolically it fits fairly well: if piglets were thrown into a chasm to represent Eubouleus and his swine herd being swallowed in the earth during the abduction of Persephone, then retrieving them from the snakes may be equated with the return of Persephone to land of the living, freed from the hands of death itself, and then returned to her mother as the piglets are offered on the altar to Demeter. Furthermore, the fertility imagery is completed in this relationship; the fecund female symbol interacts with the male symbol creating a product (rotting flesh) that is actually nutritious for seeds. Lastly, and perhaps furthest from our objectives here, is that this explanation could also shed some light on the Bronze Age and Archaic images of women handling or associating with snakes. Again, we find possible vestigial remnants of the pre-Olympian ritual of the Thesmophoria.

Evidence from the sacrificial pit or altar suggests that after the piglets were bailed out of the caverns, they were mixed with seeds and burned within the pit. While all the skeletal elements are represented, there are 40% more anterior elements than posterior. This coupled with the handful of butchered remains suggests that the piglets were split and either shared with other participants, offered elsewhere, or brought to fields to be spread.

Some of the ideas presented here admittedly challenge our sensibilities, but then so do the rest of the Thesmophoric

rituals. Having said this, our ideas of what is “sensible” vary from person to person. We have to be able to strip ourselves of our own inhibitions in order to review objectively the evidence and what it entails. We also must consider our subjects, and what we already know of them to be true. For example, most of us would not consider slaughtering an animal for our own god(s) as reasonable, yet in antiquity sacrifice was a fundamental part of the religious system. Even ideas of slavery and pederasty, commonplace in ancient Greece, are concepts that are not only considered unreasonable by our western society, but also abhorrent and cruel. Likewise with the casting live piglets into snake pits with the purpose of retrieving putrid meat; such acts would be regarded as unorthodox and outrageous in our modern world, but not perhaps to the *Thesmophoriazousai*.

DEBORAH RUSCILLO  
Department of Anthropology  
Washington University in St. Louis  
Campus Box 1114  
St. Louis, MO 63130-4899  
USA  
druscill@artsci.wustl.edu

## Bibliography

- Bartlett, R.D. & P.P. Bartlett 1998. *Snakes: A complete pet owner's manual*, New York.
- Boessneck, J. & A. von den Driesch 1979. 'Die Tierknochenfunde mit Ausnahme der Fischknochen', in *Eketorp, Befestigung und Siedlung auf Öland/Schweden. Die Fauna*, eds. J. Boessneck, A. von den Driesch & L. Stenberger, Stockholm, 24–421.
- Bookidis, N., J. Hansen, L. Snyder & P. Goldberg 1999. 'Dining in the sanctuary of Demeter and Kore at Corinth', *Hesperia* 68, 1–54.
- Bremmer, J.N. 2005. 'The sacrifice of pregnant animals', in *Greek sacrificial ritual, Olympian and chthonian. Proceedings of the Sixth International Seminar on ancient Greek cult, organized by the Department of Classical Archaeology and Ancient History, Göteborg University, 25–27 April 1997* (ActaAth-8°, 18), eds. R. Hägg & B. Alroth, Stockholm, 155–165.
- Brumfield, A.C. 1981. *The Attic festivals of Demeter and their relation to the agricultural year*, New York.
- Bruneau, Ph. 1970. *Recherches sur les cultes de Delos à l'époque hellénistique et à l'époque impériale* (BÉFAR, 217), Paris.
- Burkert, W. 1985. *Greek religion. Archaic and Classical*, Cambridge, MA.
- Clinton, K. 1974. *The sacred officials of the Eleusinian mysteries* (TAPS, N.S, 64:3), Philadelphia.
- Clinton, K. 1988. 'Sacrifice at the Eleusinian mysteries', in *Early Greek cult practice. Proceedings of the Fifth International Symposium at the Swedish Institute at Athens, 26–29 June, 1986* (ActaAth-4°, 38), eds. R. Hägg, N. Marinatos & G.C. Nordquist, Stockholm, 69–80.
- Clinton, K. 2005. 'Pigs in Greek rituals', in *Greek sacrificial ritual, Olympian and chthonian. Proceedings of the Sixth International Seminar on ancient Greek cult, organized by the Department of Classical Archaeology and Ancient History, Göteborg University, 25–27 April 1997* (ActaAth-8°, 18), eds. R. Hägg & B. Alroth, Stockholm, 167–179.
- Clutton-Brock, J. 1982. 'Animal bones', in *Excavations at Chios 1938–55: Prehistoric Emporio and Ayio Gala* (BSA suppl., 16), ed. S. Hood, London, 678–697.
- Crabtree, P. 1984. 'Faunal skeletal remains from Cyrene', in *The extramural sanctuary of Demeter and Persephone at Cyrene, Libya. Final reports I. Introduction and background to the excavations*, ed. D. White, Philadelphia, 113–123.
- Deubner, L. 1932. *Attische Feste*, Berlin.
- Diamond, J. 1994. 'Dining with the snakes', *Discover* 15:4, 48–59.
- Durand, J.-L. 1986. *Sacrifice et labour en Grèce ancienne. Essai d'anthropologie religieuse* (Images à l'appui, 1), Paris & Roma.
- Ekroth, G. 1998. 'Altars in Greek hero-cults. A review of the archaeological evidence', in *Ancient Greek cult practice from the archaeological evidence. Proceedings of the Fourth International Seminar on ancient Greek cult, organized by the Swedish Institute at Athens, 22–24 October 1993* (ActaAth-8°, 15), ed. R. Hägg, Stockholm, 117–130.
- Engelmann, W.-E. & F.J. Obst 1984. *Snakes: Biology and relationship to man*, Leipzig.
- Evans, N.A. 2002. 'Sanctuaries, sacrifices and the Eleusinian mysteries', *Numen* 49, 227–254.
- Foley, H. 1994. *The Homeric hymn to Demeter: Translation, commentary, and interpretive essays*, Princeton.

- Forstenpointner, G. 2001. 'Demeter im Artemision? – Archäologische Überlegungen zu den Schweineknöchelfunden aus dem Artemision', in *Der Kosmos der Artemis von Ephesos* (Österreichisches Archäologisches Institut. Sonderschriften, 37), ed. U. Muss, Wien, 49–71.
- Frazer, J.G. 1922. *The golden bough: A study in magic and religion*, London.
- Georgoudi, S. 1988. 'Γαλαθηνά : sacrifice et consommation de jeunes animaux en Grèce ancienne', in *Anthropozoologica. L'Animal dans l'alimentation humaine: les critères de choix*, ed. L. Bodson, Liège, 75–82.
- Gill, N.S. 2011. *Thesmophoria: Greek thanksgiving*, (<http://ancienthistory.about.com/cs/greoromanmyth1/a/aa102400a.htm>)
- Harrison, J. 1991<sup>3</sup>. *Prolegomena to the study of Greek religion*, Cambridge.
- Jameson, M.H. 1988. 'Sacrifice and animal husbandry in Classical Greece', in *Pastoral economies in Classical antiquity* (PCPhS supplement, 14), ed. C.R. Whittaker, Cambridge, 87–119.
- Jarman, M.R. 1973. 'Preliminary report on the animal bones', in *Knossos: The sanctuary of Demeter* (BSA supplement, 16), ed. J.N. Coldstream, London, 177–179.
- Jordan, D. & J. Curbera 1998. 'Curse tablets from Mytilene', *Phoenix* 52, 31–41.
- Kadletz, E. 1976. *Animal sacrifice in Greek and Roman religion*, diss., University of Washington, Seattle.
- Lauwerier, R.C.G.M. 1983. 'Pigs, piglets and determining the season of slaughtering', *JAS* 10, 483–488.
- Lobeck, C.A. 1829. *Aglaophamus: Sive. De theologiae mysticae Graecorum causis libri tres. Idemque poetarum Orphicorum dispersas reliquias collegit*, Regimonti.
- Mayor, A. 2000. *The first fossil hunters: Paleontology in Greek and Roman times*, Princeton.
- Muller, A. 1996. *Les terres cuites votives du Thesmophorion de l'atelier au sanctuaire* (Études thasiennes, 17), Athens & Paris.
- Nagy, G. 2000. 'Homeric Hymn to Demeter', (<http://www.stoa.org/diotima/anthology/demeter.shtml>)
- Nilsson, M.P. 2009<sup>3</sup>. *Greek popular religion*, New York.
- Nock, A.D. 1944. 'The cult of heroes', *HTbR* 37, 141–174 (= *Essays on religion and the ancient world. Selected and edited, with an introduction, bibliography of Nock's writings, and indexes*, vols. 1–2, ed. Z. Stewart, Oxford 1972, 575–602).
- Payne, S. & G. Bull 1988. 'Components of variation in measurements of pig bones and teeth, and the use of measurements to distinguish wild from domestic pig remains', *Archaeozoologia* 2, 27–66.
- Reese, D.S. 1989. 'Faunal remains from the altar of Aphrodite Ourania, Athens', *Hesperia* 58, 63–70.
- Rumscheid, F. 1998. *Priene: A guide to the Pompeii of Asia Minor*, Istanbul.
- Ruscillo, D. 1993. 'Faunal remains from the Acropolis site, Mytilene', *EchCl* 12, 201–210.
- Schlesier, R. 1991–1992. 'Olympian versus Chthonic religion', *Scripta Classica Israelica* 11, 38–51.
- Scullion, S. 1994. 'Olympian and chthonian', *CLAnt* 13, 75–119.
- Shipman, P., G. Foster & M. Schoeninger 1984. 'Burnt bones and teeth: An experimental study of color, morphology, crystal structure, and shrinkage', *JAS* 11, 307–325.
- Silver, I.A. 1969<sup>2</sup>. 'The ageing of domestic animals', *Science in archaeology. A survey of progress and research*, eds. D. Brothwell & E. Higgs. London, 283–302.
- Simon, E. 1983. *Festivals of Attica. An archaeological commentary* (Wisconsin studies in Classics), Madison.
- Stallsmith, A.B. 2009. 'Interpreting the Athenian Thesmophoria', *Classical Bulletin* 84, 28–45.
- Stroud, R. 1968. 'The sanctuary of Demeter and Kore on Acrocorinth', *Hesperia* 37, 299–330.
- Tynes, V.V. 2010. *Behavior of exotic pets*, Oxford 2010.
- van Straten, F.T. 1995. *Hiera kalá. Images of animal sacrifice in Archaic and Classical Greece* (Religions in the Graeco-Roman world, 127), Leiden.
- Williams, H. 1991. 'Excavations at Mytilene, 1990', *EchCl* 35:10, 175–191.
- Williams, H. 1994. 'The secret rites of Lesbos', *Archaeology* 47, 34–40.
- Williams, C. & H. Williams 1988. 'Excavations at Mytilene (Lesbos) 1987', *EchCl* 7, 135–149.
- Yavis, C.G. 1949. *Greek altars: Origin and typology*, St. Louis.

